



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

Montgomery County Regulation on:

STORMWATER MANAGEMENT

DEPARTMENTS OF PERMITTING SERVICES AND ENVIRONMENTAL PROTECTION

Issued by: County Executive
Regulation No. 7-02AM

Authority: Code Section 19-30
Council Review: Method (2) under Code Section 2A-15
Register Vol 19, No. 4

Comment Deadline: April 30, 2002
Effective Date: July 23, 2002
Sunset Date:

Summary: This regulation supercedes Executive Regulation #5-90 to reflect changes in Chapter 19, Article II, of the County Code regarding stormwater management facility design and maintenance.

Address: Written comments on these regulations should be sent to:
Rick Brush
Division of Land Development
Department of Permitting Services
255 Rockville Pike
Rockville, Maryland 20850

Boyd Church
Division of Environmental Policy and Compliance
Department of Environmental Protection
255 Rockville Pike
Rockville, Maryland 20850

Staff: For further information or to obtain a copy of this regulation, contact Rick Brush at (240) 777-8800 or Boyd Church at (240) 777-7770.



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

Sec. 1. Regulation

Section I. Authority and Purpose

A. In accordance with the authority conferred under Chapter 19, Section 19-31, of the Montgomery County Code, 1994, as amended (hereinafter referred to as the "Code"), the County Executive hereby promulgates this regulation for the purpose of implementing the County's stormwater management program as set forth in Chapter 19 of the Code.

B. This regulation pertains to all applications for approval of preliminary plans, stormwater management plans and sediment control permits, the issuance of building permits for new construction, financial security requirements, easements, agreements and maintenance requirements for on-site stormwater management controls, best management practices design criteria, and waivers.

Section II. Definitions

The definitions of terms used in this regulation are provided in Chapter 19, Section 19-21, of the Code. For purposes of this regulation, the following additional words and phrases will have the meanings respectively ascribed to them by this regulation:

Hotspot: An area where land use or activities generate highly contaminated runoff with concentrations of pollutants in excess of those typically found in stormwater.

Soil Survey: The Soil Survey of Montgomery County, Maryland, Natural Resources Conservation Service, U.S. Department of Agriculture, July 1995.

Stormwater management concept plan: A statement or drawing, or both, describing the manner in which stormwater runoff from the proposed development will be controlled to minimize damage to neighboring properties and receiving streams and to also prevent the discharge of pollutants into surface waters.

Section III. General Administration; Stages of Plan Approval

A. Stormwater management concept stage.

1. Plan required. Before the Montgomery County Planning Board approves a preliminary plan of subdivision, the Department of Permitting Services must review and approve a stormwater management concept plan submitted by the applicant. If a preliminary plan of subdivision or site plan is



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

not required, then the Department must approve the stormwater management concept plan before the applicant may apply for a sediment control permit.

2. Contents. The concept plan must include the following information:

- a) A description of how stormwater runoff from the development will be controlled to preserve or improve water quality, prevent on-site and off-site stream channel erosion, and maintain groundwater levels;
- b) An analysis of existing water quality conditions, including locating streams, impoundments, and wetlands on the site;
- c) The results of geotechnical investigations, such as soil borings and perc tests when structural recharge is proposed; and
- d) An indication of the method of access to the facilities from public rights of way for the purpose of maintenance.

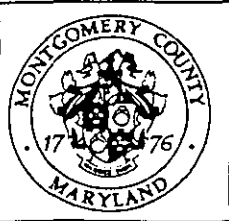
3. Notice to other property owners. The applicant must provide written notification of the pending preliminary plan application to the owners of any properties that adjoin the site of the proposed development or that are within 500 feet downstream of the proposed development within 10 days after having submitted the application. The notice must be sent by registered mail and must include a copy of the stormwater management concept plan, the preliminary plan reference number, and a statement informing the property owners that they must submit in writing any comments concerning the preliminary plan to the Department within 21 days after receiving the notice. The applicant must certify to the Department that the applicant has provided the required notice to property owners by submitting a copy of the notice and a list of the persons notified to the Department within 20 days after submitting the preliminary plan application.

4. Hydrology. This Section presumes that pre-development conditions are woodland or meadow in good hydrologic condition for the planning and placement of stormwater management structures.

B. Sediment control permit stage.

1. Any person required under Chapter 19 of the Code to obtain a sediment control permit must include a stormwater management design plan as part of the application for that permit. The design plan must conform to the approved stormwater management concept plan. The application must include:

- a) construction drawings for all stormwater management facilities in accordance with criteria established in Chapter 19 of the Code;



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

- b) construction specifications;
- c) structural computations and certifications signed by an engineer registered in the state of Maryland;
- d) supporting hydrologic, hydraulic, and design computations;
- e) soil analysis;
- f) drainage area and watershed data;
- g) a landscape plan, prepared by a landscape architect registered in the state of Maryland, for all surface structures, that addresses aesthetic, habitat, and water quality needs, and is in conformance with Department standards;
- h) for ponds, if any, standard certifications and signature blocks must be on design drawings before submittal for signature to the Montgomery Soil Conservation District; and
- i) all other necessary information needed for review and approval by the Department.

2. If the proposed stormwater management facility is on land that is either owned by or proposed for dedication to the Maryland-National Capital Park and Planning Commission, the stormwater management design plan must be approved by the Board before the Department may approve the plan and issue a building permit for the proposed development. An applicant that proposes dedicating land to the Commission must enter into an agreement to dedicate land with the Board and provide a certified copy of that agreement to the Department along with the Board's written approval of the design plan.

3. If constructing a stormwater management facility on the proposed development site is likely to affect existing or proposed water and sewer lines, the Washington Suburban Sanitary Commission's approval of the stormwater management concept plan is required before the Department may approve the plan and issue a building permit for the proposed development.

C. Qualifications for Both Concept and Design Plans

1. Stormwater management concept and design plans must be prepared by a professional engineer, professional land surveyor, or landscape architect licensed in Maryland. If a stormwater best management practice requires either a dam safety permit from the Maryland Department of the Environment or a small pond approval from the District, the design plan must be prepared by a professional engineer licensed in the State of Maryland.

2. Best management practices. The applicant must document adherence to minimum stormwater control requirements at the stormwater management concept plan approval stage and at the



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

sediment control permit approval stage. Before an application for a sediment control permit is approved, the applicant must enter into an easement and maintenance agreement with the County, approved as to form and substance by the Director, to ensure continued compliance with structural and nonstructural best management practices; however, the Director may waive this requirement as it relates to nonstructural best management practices for single family lots or properties when the Director is satisfied and reasonably certain that the nonstructural best management practices will remain functional after construction of the development is complete.

D. Installation Inspections

1. The applicant must notify the Department at least 48 hours before beginning any construction activity in conjunction with a stormwater management plan and hold a pre-construction conference with a designated representative of the Department.

2. The Department or a professional engineer licensed by the State of Maryland must perform installation inspections of any stormwater management facility under construction as needed to ensure that the facility complies with approved plans. The inspector must perform the inspections in accordance with Department-approved checklists for each type of stormwater management facility. The person performing the inspection must prepare a written inspection report for the Department to maintain that includes the following information:

- a) The date and location of the inspection;
- b) Whether construction was in compliance with the approved stormwater management plan;
- c) Any variations from the approved construction specifications; and
- d) Any existing violations of applicable County law.

3. The Department must notify the applicant in writing if the person conducting the inspection observes any violations of applicable County law during the inspection. The written notification must describe the nature of the violation and prescribe the corrective action needed.

4. No construction work on a stormwater management facility may proceed until the Department inspects and approves the work previously completed and furnishes the results of the inspection reports to the applicant after completing each required inspection.

5. If the applicant and the Department have entered into a financial security agreement that specifies the various stages of work to be completed on the facility, the applicant must contact the Department after completing each stage to request an inspection. After the Director certifies that the applicant has completed that stage of work in accordance with the approved plan, the Director may reduce



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

the required financial security by a prorated amount or may direct the Director of Finance to refund to the applicant a prorated share of the amount of financial security that the applicant deposited with the County.

6. Once construction is complete, the applicant must submit an as-built plan and certification to the Department to ensure that the stormwater management facility has been constructed in conformance with approved plans and specifications. The plan and certification must be prepared by a professional engineer, professional land surveyor, or landscape architect that is licensed or registered in the State of Maryland or by any other person whose qualifications to prepare as-built plans and certifications are acceptable to the Department. A Maryland-licensed professional engineer must prepare the plans and certifications for ponds.

Section IV. Stormwater Management Measures

A. Structural Stormwater Management Measures

1. An applicant must design and construct the following structural best management practices in accordance with the Design Manual as well as local standards instituted by the Department to satisfy the applicable minimum control requirements established under County law:

- Stormwater management ponds;
- Stormwater management wetlands;
- Stormwater management infiltration;
- Stormwater management filtering systems; and
- Stormwater management open channel systems.

2. The applicant must consider performance criteria specified in the Design Manual in relation to general feasibility, conveyance, pretreatment, treatment and geometry, environment and landscaping, and maintenance when selecting structural management practices.

3. The applicant must select structural stormwater management practices to accommodate the unique hydrologic or geologic regions of the County.

B. Nonstructural Stormwater Management Measures

1. An applicant must apply the following nonstructural best management practices in accordance with the Design Manual as well as local standards instituted by the Department to minimize increases in new development runoff:

- Natural area conservation;



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

- b) Disconnection of rooftop runoff;
- c) Disconnection of non-rooftop runoff;
- d) Sheet flow to buffers;
- e) Grass channels; and
- f) Environmentally sensitive development.

2. The Director may reduce the minimum control requirements specified under County law when nonstructural stormwater management practices are incorporated into site designs according to the Design Manual.

C. Specific Design Considerations

1. Water quality. The design of best management practices must consider the thermal effects of the development on receiving streams. The applicant must mitigate these effects if the Director determines that mitigation is necessary to preserve the water quality of the receiving streams.

2. Recharge. If the delineation is unclear in the Soil Survey or if a hydrologic soil group is not assigned to a specific soil, then the default hydrologic soil group for recharge design is "B."¹ There are no recharge requirements for redevelopment project sites or for sites identified as hotspots.

3. Channel protection. All surface ponds in Use III, Use IV, and high quality Use I watersheds must be designed to provide 12-hour extended detention of the one-year, 24-hour storm event. All other surface ponds and all underground structures must be designed to provide 24-hour extended detention of the one-year, 24-hour storm event.

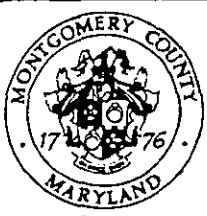
4. Flood protection.

a) Overbank flood protection may only be required if the Director determines that the receiving floodplain, flow path, or storm drain system is insufficient to handle the flow from a 10-year storm. In such cases, the stormwater management concept plan must show how the peak discharge of the predeveloped 10-year, 24-hour storm is maintained.

b) Management of the 100-year storm is required only when the department determines that controls are necessary to protect existing buildings.

5. Nonstructural best management practices. The Director may accept nonstructural management practices to help satisfy the minimum stormwater control requirements when the Director is

¹ Soil types are grouped hydrologically in the Soil Survey.



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

reasonably certain that the nonstructural management practices will remain functional after construction of the development is complete.

Section V. Contributions and Dedications

- A. An applicant making a contribution under Chapter 19 must provide the contribution to the County before the Director issues a building permit for the development.
- B. An applicant dedicating land under Chapter 19 must sign any agreement entered into with the Department or the Board before recording the plats for the land being dedicated. If no recorded plat is required, then the applicant must enter into the agreement with the Department or the Board before the Director may issue a building permit to the applicant. The applicant must provide to the Department a certified copy of any signed agreement entered into with the Board.

Section VI. Inspections and Maintenance

- A. Notification required. A person must notify the Department of Environmental Protection at least 48 hours before initiating any maintenance work on a stormwater management facility.
- B. Qualifications of maintenance personnel. A person that performs repair or maintenance on a stormwater management facility must have demonstrated experience in stormwater management facility construction and inspection and hold a certificate of attendance awarded through a training program approved by the Department of Environmental Protection. A person that performs repair or maintenance on an underground facility must have the training and credentials required under applicable state and federal law.
- C. Final inspection. Upon completion of the repair or maintenance on a stormwater management facility, the Department must conduct a final inspection of the facility. If the Director determines that the facility is not in proper working condition, the Director must prepare a written report specifying the additional repair or maintenance needed to place the facility in proper working condition and provide a copy of the report to the owner of the facility.

Section VII. Disposal Requirements

- A. Any person performing repair or maintenance on a stormwater management facility must ensure that the receptacle used to transport materials or debris resulting from the repair or maintenance has been cleaned of all septage residue if the receptacle was previously used to transport septage.



MONTGOMERY COUNTY EXECUTIVE REGULATION

Offices of the County Executive • 101 Monroe Street • Rockville, Maryland 20850

Subject Stormwater Management	Number 7-02AM
Originating Department Department of Permitting and Environmental Protection	Effective Date July 23, 2002

B. Any person that transports waste materials resulting from repair or maintenance of a stormwater management facility must submit a report to the Department of Environmental Protection within 24 hours after disposing of the materials. The report must be on a form provided by the Department of Environmental Protection and must include the following information along with a copy of the receipt from the disposal facility where the materials are deposited:

1. Name, address, and phone number of the person transporting the materials;
2. Sequence number and location of the facility from which the materials were removed;
3. Types of structures from which the materials were removed and the number of structures at the site;
4. Amount and types of waste materials removed;
5. Date the material was removed; and
6. Location of the facility to which the materials were delivered for disposal.

Sec. 2. Severability

If a court holds that a portion of this regulation is invalid, the other portions remain in effect.

Sec. 3. Effective Date

This regulation takes effect upon approval by the County Council.

Approved as to Form and Legality
Office of County Attorney

By [Signature]

Date 7/16/02

[Signature]
Douglas M. Duncan,
County Executive



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	August 2, 1990

Montgomery County Regulation on:

STORMWATER MANAGEMENT

DEPARTMENT OF PERMITTING SERVICES

Issued by: County Executive
Regulation No. 5-90

Authority: Code Section 19-31
Supersedes: Executive Regulation No. 37-86
Council Review: Method 2 under Code Section 2A-15
Register Vol. 1, Issue 3
Comment Deadline: April 6, 1990
Effective Date: August 2, 1990
Sunset Date: None

SUMMARY: This executive regulation is the same as Executive Regulation #37-86 with one amendment and the application of plain language standards. This amendment removes Section 4 from Section from Executive Regulation #37-86 in its entirety.

ADDRESSES: Division of Water Resources Management
250 Hungerford Drive, Second Floor
Rockville, Maryland 20850

STAFF CONTACT: Richard Brush, (301) 217-6300

BACKGROUND INFORMATION: The purpose of this regulation is to remove Section 4 from Executive Regulation #37-86. The purpose of this removal is to separate the contribution schedule from the other stormwater management regulations and to facilitate future adjustments to the contribution schedule. There are no other changes made to existing Executive Regulation #37-86.

Resolution No. 11-2122
Introduced: July 3, 1990
Adopted: July 3, 1990

COUNTY COUNCIL
FOR MONTGOMERY COUNTY, MARYLAND

By: County Council

SUBJECT: Executive Regulation 5-90, Stormwater Management

BACKGROUND:

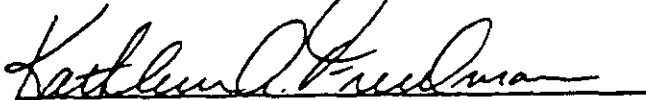
1. On May 4, 1990, the County Executive submitted Executive Regulation 5-90, Stormwater Management.
2. These regulations are submitted for Council review under Method 2, which means that if the Council has not approved them in whole or in part, or extended the review period by July 4, 1990, these regulations are adopted by default.
3. On June 29, 1990, the Transportation and Environment Committee reviewed these regulations and recommended approval.

ACTION

The County Council for Montgomery County, Maryland approved the following resolution:

Executive Regulation 5-90, Stormwater Management, is approved.

This is a correct copy of Council action.


Kathleen A. Freedman, CMC
Secretary of the County Council

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

Section 1. Authority - Definitions

A. Authority:

In accordance with procedures authorized in Chapter 19, entitled "Erosion and Sediment Control and Stormwater Management," Section 19-31, and in Chapter 2, Section 2-105, of the Montgomery County Code 1984, as amended (hereinafter referred to as "the Code"), and in compliance with Sections 8-11A-01 through 8-11A-08, Natural Resources Article, Annotated Code of Maryland, and with COMAR 08.05.05.01 through 08.95.05.10, the following Executive Regulation will pertain to all applications for Preliminary Plan approval, Record Plat approval, building permit issuance for new construction, sediment control/stormwater management plan approval and grading permits, and to performance bond requirements, required maintenance easements and agreements, maintenance of on-site facilities, and stormwater management participation, and appeal procedures.

B. Definitions:

Definitions of the terms used in this regulation are provided in Chapter 19, Section 19-21, of the Code. For the purpose of this regulation, the following additional words and phrases will have the meaning respectively ascribed to them by this regulation:

Best Management Practices or BMPs: Structures or other measures that partially meet the objectives of this regulation but have not been approved as practices meeting State and County stormwater management criteria.

Detention: Storage of runoff in a structure that provides for no permanent pool of water.

Facility: See Stormwater Management Facility.

Flow Rate Control: Prolonging the discharge of runoff to reduce the peak rate of discharge.

Impoundment: A structure created by embankment or excavation or both capable of storing water.

Permanent Pool: A permanent body of water created by an embankment or excavation or both.

Phasing Statement: An agreement by the developer in the form of a letter to the Department of Environmental Protection (DEP) which outlines the planned sequence of development and states the stage of development at which various stormwater management commitments (e.g., design submittal, start of facility construction and implementation of construction) will be made.

Preliminary Stormwater Management Plan: Drawings representing proposed location, contours and vegetation of proposed stormwater management facilities along with supporting hydrologic, hydraulic and storage volume computations.

Retention: Storage of runoff in a facility that provides for a permanent pool of water.

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

Small Land Disturbing Activities Permit Application: Application for a sediment control permit for minimum land disturbance of less than 30,000 square feet for residential or 20,000 square feet for other than residential, minimum grading of less than 1,000 cubic yards of excavation and fill, and the establishment of less than 15,000 square feet of impervious surface.

Stormwater Management Concept Plan: A statement or drawing, or both, describing the manner in which storm runoff from the proposed development will be controlled to prevent damage to neighboring properties and receiving streams and to prevent the discharge of pollutants into surface waters.

Stormwater Management Design Plans: Final detailed engineering drawings and specifications for the construction of a stormwater management facility and supporting computations.

Stormwater Management Facility: An infiltration device, vegetative filter, structure, channel, pipe, weir, orifice, or combination of same, designed and constructed to control runoff in a manner to prevent stream channel erosion and pollution of streams resulting from storm runoff.

Water Quality Control: The reduction or elimination of pollution from storm runoff that otherwise would be carried by surface runoff.

Water Quantity Control: The controlled release of runoff flow rate and volume to prevent increased channel erosion.

Section 2. General Administration-Stages of Plan Approval

A. Preliminary Plan Stage:

All applicants for approval of Preliminary Plans of subdivision must provide a stormwater management concept plan which must include an adequate statement or drawing, or both, describing in concept, the manner in which stormwater runoff from the development and one-half adjacent County road rights-of-way will be controlled to prevent damage to neighboring properties and receiving streams, unless previously waived. All stormwater management concept plans must also indicate how all tributary streams and drainage paths within the development will be treated to prevent erosion of drainage courses and flooding (100-year storm) of structures. All plans must indicate by what method water quality requirements will be addressed. When on-site controls are proposed, the plan must indicate the general location and type of the proposed grades of the access route.

The applicant must give notice to the first five downstream property owners on each side of a stream or watercourse or all owners of property within 500 feet downstream, whichever is fewer, for each perennial stream or storm drain outfall from the site. This notice must be sent by mail. The notice must be made within ten calendar days after submission of a preliminary plan application to the Board. The applicant must certify to DEP, within twenty calendar days after submission of a preliminary plan application, that

(7)

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

such notice has been made. Certification to DEP must include a list of property owners notified and a copy of the notice.

The notice to downstream property owners must include the following:

- o A statement that an application for preliminary plan has been submitted to the Board and the preliminary plan includes a stormwater management concept plan.
- o The preliminary plan application reference number.
- o Reference to this regulation as the authority regulating review and approval of stormwater management concept plans.
- o A copy of the preliminary plan including the stormwater management concept plan.
- o A statement that DEP has the authority to approve the stormwater management concept plan and that comments concerning such plan must be addressed to DEP in writing within two weeks after receipt of the notice.
- o Comments received from property owners will be considered in the review and approval of the stormwater management concept plan.

In addition, whenever a stormwater management facility is to be located on property or land owned by or to be dedicated to the Commission, the approval of the Department of Parks will be required.

1. Stormwater Management Concept Plan:

a. Priority

In developing the stormwater management concept plan, stormwater management practices to be utilized must be considered in the following order of preference:

1. infiltration of runoff;
2. flow attenuation by use of open vegetated swales and natural depressions;
3. retention facilities; and
4. detention facilities.

b. Documentation of Priority Selection

Documentation for determining feasibility for infiltration must be made by identifying soils on the site (reference - Soil Survey, Montgomery County, Maryland, Series 1958, published by U.S. Soil Conservation Service, or most recent update) and by the feasibility tests found in the "Standards and Specifications, Infiltration Practices," published by Maryland Water Resources Administration (WRA), 1984. A list of county soils and their limitations for infiltration will be included in the Montgomery County Stormwater Management Design Manual.

Use of open vegetated swales as roadside ditches in lieu of curbs and gutters must be in accordance with requirements established by the Montgomery County Department of Transportation and site plan requirements as directed by the Board.



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

When infiltration and flow attenuation are proven infeasible, retention facilities must be used, except in cases where it can be demonstrated that significant public safety, economic, engineering, or environmental hardships would result from such use.

The approval of the Director is required for use of detention in lieu of retention facilities. As a guide, retention facilities generally must have a ratio of drainage area to surface area of at least 40:1, with a minimum 10 acre drainage area and a minimum water surface area of 1/4 acre.

2. Waivers

A waiver of on-site stormwater management requirements may be granted by the Director for individual developments, in accordance with Section 2.A.2.a through 2.A.2.f of this regulation, provided that a written request is submitted to DEP by the applicant containing descriptions, drawings, and any other information that is necessary to evaluate the proposed development. This waiver request must address both the two-year storm control requirements and the water quality requirements of Section 4.8.3.b of this regulation. The granting of a waiver of one type of control feature (e.g., flow-year control) will not release the applicant from the obligation of the other type of control (e.g., water quality).

The cumulative effect of all waivers in a watershed must be evaluated when it is determined appropriate by the Director.

Water quality waivers may be granted subject to providing specific best management practices including both on-site and off-site improvements. When this is done, an equivalent area and land use must be controlled in a regional or other stormwater management facility and, where feasible, in the same watershed. Where a development is waived of water quality requirements, it must provide appropriate best management practices approved by DEP.

A separate written waiver request is required, in accordance with the provisions of this section, when there are subsequent additions, extensions, or modifications to a development receiving a waiver.

To obtain a waiver, the applicant must demonstrate that:

a. the hydraulic characteristics of the receiving stream and the watershed, and the water quality and environmental characteristics of the stream and the site, are such that on-site management (infiltration, retention, detention) is contrary to obtaining the objective of stream channel erosion prevention and water quality protection; or

b. an off-site stormwater management facility has been either constructed, programmed, or identified for construction in the capital improvements program, an adequate conveyance system to the facility will be provided, and the off-site facility will incorporate the controls for which a waiver is requested. However, when a development proceeds before the off-site facility is constructed and it is determined by DEP that damages would occur

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject Stormwater Management

Number 5-90

Originating Department Department of Environmental Protection

Effective Date

to the stream, DEP may require the installation and maintenance of temporary on-site facilities until the off-site facility is operational; or

c. the proposed development will not generate more than a 10 percent increase in the two-year pre-development, peak discharge rate and will not cause an adverse impact on the receiving watercourse or waterbody; or

d. the site is surrounded by existing developed areas which are served by an existing network of improved storm drainage systems of adequate capacity to accommodate the runoff from the additional development. However, when a waiver of water quality control is granted, best management practices may be required for parking lots or other impervious surfaces; or

e. the site falls under one of the standard stormwater management contribution categories listed below. These are developments for which a stormwater management contribution rather than the requirements for a stormwater management facility controlling the two-year storm and water quality will normally be required. However, best management practices may be required for parking lots or other impervious surfaces. The standard contribution categories are as follows:

(1) subdivisions of detached single-family residential developments:

<u>Minimum Lot Size</u>	<u>Maximum Subdivision Size</u>
1 acre	10 acres
1/2 acre	5 acres
15,000 square feet	2 acres
9,000 square feet	2 acres
6,000 square feet	2 acres

(2) subdivisions of multi-family residential developments:

subdivisions developments which total 2 acres or less.

(3) institutional/recreational developments:

developments in which there are 2 acres or less of disturbed area and, included therein, 1/2 acre or less of impervious area.

(4) industrial and commercial developments:

developments in which the total disturbed area is 30,000 square feet or less and, included therein, 15,000 square feet or less of impervious area.

Any new projects which are additions, extensions and/or modifications to those developments listed in the above categories which previously have not been required to build a stormwater management facility may be required to provide stormwater management for the entire site when the acreage limitations listed for each are exceeded by the subsequent addition, extension and/or modification thereto; or

f. all conforming residential developments which use the "small land disturbing activities permit application" are not required to provide



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

stormwater management, but are required to pay an appropriate stormwater management contribution.

3. Requests for Waivers

All waiver requests must be submitted to DEP in two copies. Such waiver requests must include supporting documentation as required by DEP in sufficient detail to provide for evaluation of the impacts upon receiving drainage systems and streams.

Upon receipt of a complete waiver request, a copy will be forwarded by DEP to the Board staff for review and comment prior to action by DEP. Written comments from the Board staff will be considered by DEP and will become part of the permanent waiver request file.

Incomplete waiver requests will be returned to the applicant with a listing of the required additional supporting documentation.

4. Exemptions

a. The following development activities are exempt from the provisions of this regulation:

- (1) agricultural land management activities;
- (2) additions or modifications to existing single-family detached residential structures;
- (3) land development activities which the Water Resources Administration determines will be regulated under specific State laws which provide for managing stormwater runoff; or
- (4) residential developments consisting of single-family structures each on a lot of two acres or greater.

b. Developments that do not disturb over 5,000 square feet of land area are exempt from providing on-site stormwater management; however, such developments may be subject to a stormwater management contribution. Such contributions will be determined on a case-by-case basis by DEP.

B. Record Plat Stage

Prior to the recordation of a plat of subdivision, the method by which the stormwater management requirements are to be satisfied must have been approved by DEP as meeting the provisions of Chapter 19 and this regulation. Where stormwater management is required, the Director may require the following to be documented in support of each plat:

1. location of the facility;
2. location of the easement for the facility;
3. location and profile of the access easement for inspection and maintenance of the facility;
4. method by which the stormwater management obligation is to be met for both water quantity and water quality controls; and/or
5. notice and definition of the maintenance responsibility for stormwater management facilities.



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

C. Site Plan Stage

For developments for which site plan review is required by the Zoning Ordinance, the site plan submission must include a preliminary stormwater management plan which includes the same documentation as a concept plan plus the specific location, approximate contours and proposed vegetation, both terrestrial and aquatic, for the proposed stormwater management facility along with supporting hydrologic, hydraulic and storage volume computations. All water quality features for the development must also be shown on the site plan. The location of stormwater management easements must also be indicated. This information must be submitted through the Board to DEP for review and approval of the preliminary stormwater management plan. These requirements also apply to site plan revisions. Final design approval of proposed stormwater management facilities will not be made prior to Board action on the site plan.

D. Sediment Control/Stormwater Management Plan Stage

Stormwater management plans must be approved for meeting design requirements and for compliance with the provisions of Chapter 19, Section 19-30, and this regulation, by DEP. As part of the submission for approval of sediment control plans, stormwater management must be addressed in one of the following ways:

1. Where a building permit will be required:

a. the applicant must provide design plans for stormwater management in accordance with the concepts approved as conditions of the approved preliminary plan. The applicant must also provide stormwater management easements and a maintenance agreement as conditions of approval of the stormwater management plans by DEP; or

b. the applicant must provide an approved stormwater management concept and development phasing statement; or

c. where the requirements of on-site stormwater management have been waived, the applicant must provide to DEP for approval a statement as to how the stormwater management commitment will be met (e.g., by monetary contribution, BMPs grant of an easement, dedication of land or stormwater management facility). This includes all conforming residential developments which use the "small land disturbing activities permit application."

2. Where no building permit will be required:

In cases such as parking surfaces or other impervious surfaces, an approved stormwater management plan, or a waiver thereof, is required. Where a waiver is granted, a contribution will be required prior to issuance of a sediment control permit.

In the case of public road projects, the appropriate agency must coordinate its planning and design activities with DEP in developing potential regional stormwater management facilities and a letter of concurrence must be



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number 5-90
Originating Department	Department of Environmental Protection	Effective Date

obtained from DEP for each project. Each road project must include stormwater management controls for both flow rate and water quality unless waived by DEP.

E. Building Permit Stage

1. New Construction

Prior to the issuance of any building permit for all new construction (including redevelopment) on any parcel or lot, the following must be submitted to DEP:

a. an approved stormwater management plan along with appropriate maintenance easements and covenants, and, where on park property, evidence of design approval and acceptance of maintenance responsibility by the Department of Parks; or

b. where runoff is to be controlled in another private facility, documentation, approved by DEP, of a private arrangement for off-site runoff storage, adequacy of conveyance and storage facilities and of acceptance of uncontrolled runoff by the owner of the runoff conveyance system and the runoff control facility, and where applicable, a recorded stormwater management easement and maintenance covenant for the facility; or

c. where applicable, an approved development phasing statement; or

d. where applicable, evidence of a waiver of on-site stormwater management.

2. Additions

Prior to the issuance of any building permit for all additions for other than an individual single-family dwelling, the following must be on file with DEP:

a. an approved stormwater management plan, and, where appropriate, a stormwater management easement and a stormwater management maintenance agreement; or

b. evidence of a waiver of on-site stormwater management.

Where a waiver of on-site stormwater management has been granted for the lot or parcel for which a building permit has been applied, the applicant must provide the appropriate contribution as determined by DEP.

Nothing in this section may be construed to mean that the stormwater management requirements cannot be satisfied by a combination of on-site and off-site facilities, if so approved by DEP.

Section 3. Performance Bond

The Stormwater Management Performance Bond as required in Section 19-32, Chapter 19, of the Code, may be combined with the Sediment Control Bond, and the Director may grant partial or a complete waiver of such Bond in accordance with Section 19-10 of the same chapter.

Upon completion of the stormwater management facility, the applicant must notify DEP and, if on Park property or land to be dedicated to Parks, the

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

Parks Department of such completion. Upon certification by DEP, and, when appropriate, by the Parks Department that the facility has been satisfactorily completed, that portion of the performance bond or letter of-credit for Stormwater Management will be released.

Section 4. Criteria for Design and Construction Plans

All stormwater management and development plans must be consistent with adopted and approved watershed management plans or flood management plans as approved by the WRA, in accordance with the Flood Hazard Management Act of 1975, Section 8-9A-01 et.seq., Natural Resources Article, Annotated Code of Maryland.

A. Approvals of Design and Construction Plans

The approval of DEP is required for all stormwater management design and construction plans.

Natural Resources Article, Section 8-803, Annotated Code of Maryland, requires the approval of all impoundments designs for dam safety by either the Montgomery Soil Conservation District or the Maryland Water Resources Administration.

Approval of the Parks Department will be required whenever a stormwater management facility is to be located on property or land owned by or to be dedicated to the Commission.

When community water or sewer facilities are located or planned within the limits of proposed stormwater management facilities, the approval of the Washington Suburban Sanitary Commission (WSSC) is required.

B. Specific Design Criteria

1. Infiltration systems are to be designed in accordance with "Standards and Specifications - Infiltration Practices" developed by the Water Resources Administration, and must meet the following requirements:

a. infiltration systems greater than 3 feet deep must be located at least 10 feet from any basement wall, and designed so as to prevent saturation in the areas of existing or proposed building foundations, roads and parking lots and any other structure that might be vulnerable to damages from soil saturation and/or hydrostatic loading;

b. infiltration systems designed to handle runoff from commercial or industrial impervious areas must be a minimum of 100 feet from any water supply well;

c. infiltration systems must not receive runoff until the entire tributary drainage area to the infiltration system has received final stabilization; and

d. the infiltration facility design must provide an overflow system with measures to provide a non-erosive velocity of flow along its length and at the outfall.



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

2. Retention and detention impoundments must be designed and constructed in accordance with criteria of the Soil Conservation Service, the Montgomery County Stormwater Management Design Manual and must include the following items:

a. velocity dissipation devices must be placed at the outfall of all detention or retention structures and along the length of any outfall channel as necessary to provide a non-erosive velocity of flow from the structure to a water course;

b. DEP may require the developer to submit to DEP an analysis of the water quantity and water quality impacts of stormwater flows downstream in the watershed. The analysis must include hydrologic and hydraulic calculations necessary to determine the impact of hydrograph timing modifications of the proposed development upon a dam, highway, structure, or natural point of restricted stream flow, established with the concurrence of DEP, downstream of a tributary area of the following size:

(1) the first downstream tributary area which equals or exceeds the contributing area to the stormwater management facility; or

(2) the first downstream tributary area of which the peak two-year storm discharge exceeds the designed two-year release rate of the stormwater management facility.

c. the designed release rate of the structure must be modified if any increase in flood damages or stream channel erosion would result at the downstream dam, highway, structure, or natural point of restricted streamflow or if downstream water quality would be impacted unacceptably. The release rate of the structure must:

(1) be reduced to a level that will prevent any increase in flood damages or stream channel erosion at the downstream control point;

(2) be not less than one-year pre-development peak discharge rate except that extended detention storage volumes will be discharged at a rate to release such storage within 40 hours;

(3) be reduced to a level to allow adequate detention time to assure adequate water quality protection.

3. All stormwater management facilities must meet the following requirements:

a. have a tributary drainage area not in excess of 400 acres unless, on a case-by-case basis, a larger drainage area is approved by the WRA; and

b. for water quality 1) manage the one-inch rainfall event according to the infiltration standards and specifications promulgated by WRA, 2) provide for a permanent pool equal to or greater than 1/2 inch of runoff from the drainage area, or 3) provide for 24-hour detention and release of the total volume of runoff resulting from a one-year storm for central facilities, or the total volume of runoff from a one-inch rainfall for on-site facilities.

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

However, DEP may require special water quality controls in Class III and IV, and water supply watersheds; and

c. must manage the increase in peak discharge for the two-year frequency storm event; and

d. not be located so as to discharge to Class III Natural Trout Waters identified in COMAR 10.50.01.021, unless authorized by the WRA in permits issued pursuant to Natural Resources Article, Section 8-803.

4. The pre-development peak discharge rate will be computed assuming that all land uses in the tributary area are meadow in good hydrologic condition or more pervious existing conditions.

5. The developer must give consideration to incorporating the use of natural topography and land cover such as wetlands, ponds, natural swales, and depressions as they exist prior to development to the degree that they can accommodate the additional flow of water.

6. The developer must prepare and submit to DEP for approval a best management practices plan when water quality requirements have not been adequately met or have been waived.

7. Where a stormwater management plan involves direct discharge of runoff onto an adjacent site, and construction of an outfall, it is the responsibility of the developer to obtain from the adjacent property owner an easement.

8. All storm drainage systems which convey off-site storm water through a site must be public storm drainage systems or private storm drainage systems which are designed, constructed and maintained to at least the standards of public storm drainage systems. The design and construction must be certified by a professional engineer as meeting or exceeding public drainage systems standards. Private storm drainage systems must be made accessible to the upstream property owner by executing an easement approved by DEP. The owner of the private storm drainage system must execute a maintenance covenant approved by DEP for that portion of the private storm drainage system which conveys off-site stormwater.

9. The basic design criteria, methodologies, and construction specifications, subject to the approval of DEP and the WRA, generally are those of the Soil Conservation Services (SCS) and are found in the most current edition of the following publications:

a. SCS Maryland Standards and Specifications for Ponds, Practice Code 378;

b. SCS National Engineering Handbook, Sections 4 and 5;

c. SCS Engineering Field Manual;

d. SCS Technical Release #55, Urban Hydrology for Small Watersheds;

e. Stormwater Management Pond Design and Construction Manual, published by the Maryland Association of Soil Conservation Districts; and



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject Stormwater Management

Number 5-90

Originating Department

Department of Environmental Protection

Effective Date

f. Montgomery County Stormwater Management Design Manual.

Computations for stormwater management storage must include one-half of contiguous rights-of-way of existing and planned non-state roads, and must include new construction within state rights-of-way.

The latest approved SCS criteria for the design of stormwater management impoundment structures will be accepted. Other design criteria may be used only when approved by the WRA, the Director of DEP, and the District, prior to submission for review.

C. Certifications and Plan Requirements

1. The developer must certify that all land clearing, construction, development and drainage will be done according to the approved stormwater management design plan.

2. A sequence of construction and construction phasing is required on all stormwater management design plans.

3. Construction specifications approved by DEP are required on all stormwater management design plans.

4. All underground stormwater management facility designs must be certified on the design plan as being structurally sound. A building permit is required for construction of all underground facilities.

5. All stormwater management designs must be certified as meeting the requirements of this regulation and must be sealed by a professional engineer registered in the State of Maryland.

Section 5. Construction and Inspection

All construction of stormwater management facilities must meet the design criteria as stated in Section 4 of this regulation and the approved construction plans for the specific facility.

A pre-construction meeting is required prior to commencing any stormwater management facility construction.

Inspection during construction is required regularly by County staff, and at the discretion of DEP, by registered professional engineers or private inspectors under the authority of a professional engineer. DEP must be notified prior to each of the required inspection points.

Inspection of stormwater management facilities located on Park property must be jointly inspected with a Park inspector.

Record (as-built) drawings of all stormwater management facilities will be required and certified by the developer's engineer as meeting the water quantity and water quality requirements of this regulation, prior to the release of a performance bond.

A. Impoundments

The applicant must notify DEP at least twenty-four (24) hours in advance

Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

to schedule a construction inspection at each of the following stages of construction of stormwater management impoundment facilities:

1. upon installation of sediment control measures and temporary waterway diversion;
2. excavation to sub-foundation and when required, installation of structural supports or reinforcement for structures, including but not limited to:
 - a. core trenches for structural embankments,
 - b. inlet-outlet structures, anti-seep structures, and watertight connectors on pipes, and
 - c. trenches for enclosed storm drainage facilities;
3. during placement of structural fill, concrete and installation of piping and catch basins;
4. during backfill of foundations and trenches;
5. during embankment construction; and
6. upon completion of final grading and establishment of permanent stabilization.

In addition to the above requirements for notification, and when failure of the facility could cause loss of life or serious property damage, or when DEP determines that specific site conditions warrant, DEP may require the applicant to provide engineering inspection and testing during construction and when complete, certification by a professional engineer that all work completed and construction materials used meet or exceed requirements according to approved plans and specifications.

The "Stormwater Management Pond Design and Construction Manual" is the adopted reference for the design and construction of stormwater management facilities.

B. Infiltration Systems

The applicant must notify DEP to schedule a construction inspection at least twenty-four (24) hours in advance of:

1. commencing construction;
2. backfilling of infiltration trench;
3. installation of drainage facilities;
4. installation of final cover; and
5. allowing runoff to enter the system.

C. Porous Pavement

All porous pavement infiltration systems must be inspected at the following stages. The applicant must notify DEP to schedule a construction inspection at least twenty-four (24) hours in advance of commencing the following stages to provide for inspection during critical stages of construction:



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

1. upon completion of stripping, stockpiling, construction of temporary sediment control and drainage facilities;
2. upon completion of subgrade section;
3. upon completion of reservoir base course;
4. upon completion of the top crushed stone course; and
5. throughout the placement of the porous asphaltic concrete surface course to ensure proper laying temperatures and compaction.

D. Flow Attenuation Devices

All flow attenuation devices must be inspected upon completion.

E. Others

All BMPs must be inspected during construction and upon completion.

Section 6. Maintenance

All stormwater management structures must be maintained in proper working condition by the owner of the facility. If, after due notice, a facility is not properly maintained, the County may perform the necessary maintenance and assess the cost to the owner as described in Chapter 19, Section 19-30, of the Code.

The developer may request the County, through the Director to accept any on-site stormwater management facility for County maintenance as provided in Chapter 19, Section 19-30(c), of the Code. The Director may accept those facilities for County maintenance, on a case-by-case basis where the Director determines it would be in the best interest of the County to maintain such facility and that public funds are available to perform such maintenance. Acceptance of such facility satisfactory to the Director is conditioned upon the applicant providing evidence that the facility meets the criteria of Section 4 of this regulation. The applicant must also provide evidence of recorded easements. All such arrangements agreed to by the applicant and the Director must be documented by Agreement and recorded in the Land Records.

Section 7. Stormwater Management Participation

It is the intent of DEP to develop a system of regional stormwater management facilities throughout the County that conform to the County's watershed plans and maximize the economic benefit of regional facilities.

When a participation agreement has been made by the applicant and the County to provide a centralized stormwater management facility, the applicant must comply with DEP's Stormwater Management Participation Policy.



Executive Regulation

Office of the County Executive
Montgomery County, Maryland

Subject	Stormwater Management	Number	5-90
Originating Department	Department of Environmental Protection	Effective Date	

Section 8. Appeal Procedure

Where a waiver of either water quantity or water quality or both is granted (or denied) by DEP, or a stormwater management facility is required, the applicant, Board, or any aggrieved party, may appeal the decision. Such appeal must contain specific data and information that clearly substantiates that the waiver was granted, or denied, or a facility was required, in conflict with the provisions of this regulation. All appeals must be submitted to the Director within thirty (30) days of either the granting or denial of the waiver or the Board hearing date for the preliminary plan, whichever is later. The Director's decision is final.

Section 9. Effective Date

This regulation takes effect 30 days after the date of adoption by the County Council.



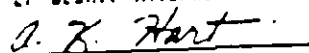
Sidney Kramer
County Executive

0466k

APPROVED AS TO FORM AND LEGALITY.

OFFICE OF COUNTY ATTORNEY

BY



DATE

2/16/90